

Appl. No. : 10/804,407
Filed : March 19, 2004

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1 (currently amended): A plastic film, comprising: a substrate; and a hard coating layer formed on at least one side of the substrate, wherein the hard coating layer has a crosslinked structure comprising a methacrylic or acrylic polymer with a hydroxyl value of 20 to 80 (KOH mg/g) and a crosslinking agent selected from the group consisting of an epoxy-type crosslinking agent and an isocyanate-type crosslinking agent, wherein the methacrylic or acrylic polymer does not contain carboxylic acid functional groups.

2 (original): The plastic film according to Claim 1, wherein the substrate is a layer comprising a polyolefin resin.

3 (original): The plastic film according to Claim 1, wherein the methacrylic or acrylic polymer is a HALS-hybrid methacrylic or acrylic polymer.

4 (original): The plastic film according to Claim 2, wherein the methacrylic or acrylic polymer is a HALS-hybrid methacrylic or acrylic polymer.

5 (original): The plastic film according to Claim 1, wherein the substrate shows a swelling rate of at most 5% after the surface of the hard coating layer of the plastic film is kept in contact with toluene for 5 minutes.

6 (original): The plastic film according to Claim 2, wherein the substrate shows a swelling rate of at most 5% after the surface of the hard coating layer of the plastic film is kept in contact with toluene for 5 minutes.

7 (original): The plastic film according to Claim 3, wherein the substrate shows a swelling rate of at most 5% after the surface of the hard coating layer of the plastic film is kept in contact with toluene for 5 minutes.

8 (original): The plastic film according to Claim 4, wherein the substrate shows a swelling rate of at most 5% after the surface of the hard coating layer of the plastic film is kept in contact with toluene for 5 minutes.

9 (original): An adhesive tape, comprising: the plastic film according to Claim 1; and a layer of a pressure-sensitive adhesive applied to the substrate or the hard coating layer of the plastic film.

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10 (original): An adhesive tape, comprising: the plastic film according to Claim 2; and a layer of a pressure-sensitive adhesive applied to the substrate or the hard coating layer of the plastic film.

11 (original): An adhesive tape, comprising: the plastic film according to Claim 3; and a layer of a pressure-sensitive adhesive applied to the substrate or the hard coating layer of the plastic film.

12 (original): An adhesive tape, comprising: the plastic film according to Claim 4; and a layer of a pressure-sensitive adhesive applied to the substrate or the hard coating layer of the plastic film.

13 (original): An adhesive tape, comprising: the plastic film according to Claim 5; and a layer of a pressure-sensitive adhesive applied to the substrate or the hard coating layer of the plastic film.

14 (original): An adhesive tape, comprising: the plastic film according to Claim 6; and a layer of a pressure-sensitive adhesive applied to the substrate or the hard coating layer of the plastic film.

15 (original): An adhesive tape, comprising: the plastic film according to Claim 7; and a layer of a pressure-sensitive adhesive applied to the substrate or the hard coating layer of the plastic film.

16 (original): An adhesive tape, comprising: the plastic film according to Claim 8; and a layer of a pressure-sensitive adhesive applied to the substrate or the hard coating layer of the plastic film.

17 (previously presented): A plastic film comprising a substrate having a thickness of about 60 μm to about 200 μm , and a hard coating layer having a thickness of about 1 μm to about 10 μm formed on at least one side of the substrate, wherein the hard coating layer has a three-dimensional structure comprising methacrylic and/or acrylic polymers crosslinked with each other, said polymers having a hydroxyl value of 20 to 80 KOH mg/g, and wherein the substrate shows a swelling rate of no more than 5% as measured after the surface of the hard coating layer of the plastic film is kept in contact with toluene for 5 minutes.

18 (previously presented): The plastic film according to Claim 17, wherein the substrate is made of a polyolefin resin.

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19 (previously presented): The plastic film according to Claim 17, wherein the methacrylic and/or acrylic polymers are HALS-hybrid methacrylic and/or acrylic polymers.

20 (currently amended): The plastic film according to Claim 19, wherein the the HALS-hybrid methacrylic and/or acrylic polymers comprise ~~HALA~~ HALS in an amount of about 0.1 % to about 50 % by weight based on the weight of the polymers.

21 (previously presented): An adhesive tape comprising the plastic film according to Claim 17 and a layer of a pressure-sensitive adhesive having a thickness of about 1 μm to about 300 μm , said layer being formed on the substrate or the hard coating layer if the hard coating layer is applied to both side of the substrate.

22 (previously presented): A method of manufacturing a plastic film comprising:
providing a substrate having a thickness of about 60 μm to about 200 μm ;
providing a polymer solution comprising methacrylic and/or acrylic polymers having a hydroxyl value of 20 to 80 KOH mg/g, a crosslinking agent, and a solvent;
applying the polymer solution on at least one side of the substrate; and
curing the polymer solution to form a hard coating layer having a thickness of about 1 μm to about 10 μm having a three-dimensional crosslinked structure,
wherein the substrate shows a swelling rate of no more than 5% as measured after the surface of the hard coating layer of the plastic film is kept in contact with toluene for 5 minutes.

23 (previously presented): The method according to Claim 22, wherein the substrate is made of a polyolefin resin.

24 (previously presented): The method according to Claim 22, wherein the methacrylic and/or acrylic polymers are HALS-hybrid methacrylic and/or acrylic polymers.

25 (currently amended): The method according to Claim 24, wherein the HALS-hybrid methacrylic and/or acrylic polymers comprise ~~HALA~~ HALS in an amount of about 0.1 % to about 50 % by weight based on the weight of the polymers.

26 (previously presented): The method according to Claim 22, further comprising forming a layer of a pressure-sensitive adhesive having a thickness of about 1 μm to about 300 μm on the substrate or the hard coating layer if the hard coating layer is applied to both side of the substrate.